Docket No.: 2081-0144PUS1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Thorsten HOLST et al.

Application No.: NEW | Confirmation No.: N/A

Filed: November 1, 2005 | Art Unit: N/A

For: MICROWAVE TRANSMISSION UNIT INCLUDING LIGHTNING PROTECTION | Examiner: Not Yet Assigned

LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The PTO is requested to use the amended sheets/claims attached hereto (which correspond to Article 19 amendments or to claims attached to the International Preliminary Examination Report (Article 34)) during prosecution of the above-identified national phase PCT application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §1.16 or 1.14; particularly, extension of time fees.

Dated: November 1, 2005

Respectfully submitted,

By _____
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Claims

1. Microwave transmission unit, such as a microwave filter (1), and including a cabinet (2) with a first coaxial connector (3) and a second coaxial connector (4), where both coaxial connectors include an inner conductor (6) and an outer conductor (7), said cabinet (2) being made of a non-conducting material, such as plastics, and coated with a metal layer, **characterised in** that the metal coating of the cabinet (2) is 5 to 200 µm thick, and that the microwave transmission unit (1) includes a lightning conductor (5) which is dimensioned so as to conduct lightning current without being damaged to any serious extent, and which is electrically connected to the outer conductor of the first coaxial connector (3) and to the outer conductor (7) of the second coaxial connector (4), said lightning conductor (5) includes a metal body of a cross-sectional area of minimum 10 to 200 mm^2.

2. Microwave transmission unit (1) according to claim 1, **characterised in** that the first coaxial connector (3) and the second coaxial connector (4) are arranged at their respective ends of the cabinet (2), and that the microwave transmission unit (1) includes a cover (5) for closing the cabinet (2), said cover including the lightning conductor.

3. Microwave transmission unit (1) according to claim 2, **characterised in** that the cover (5) is made of solid metal, preferably aluminium.

4. Microwave transmission unit (1) according to claim 2, **characterised in** that the cover (5) is made of a non-conducting material, such as plastics, and that the lightning conductor is formed as a metal body embedded in the non-conducting material.

5. Microwave transmission unit according to one of the preceding claims, **characterised in** that the lightning conductor (5) is electrically connected to the outer conductor (7) of the first coaxial connector (3) and to the outer conductor (7) of the second coaxial connector (4) through fittings (12, 21), which are screwed into said

lightning conductor (5) and a flange (28) on the coaxial connectors (3, 4) by means of screws (19).

6. Microwave transmission unit (1) according to claim 1, **characterised in** that the first coaxial connector (3) and the second coaxial connector (4) are arranged at the same end of the cabinet (2) and are fastened to a common plate-shaped metal fitting forming the lightning conductor.

7. Microwave transmission unit (1) according to claim 1, **characterised in** that the lightning conductor is formed by a mounting member (23) for mounting of the microwave transmission unit on a structural part.

8. Microwave transmission unit (1) according to one of the preceding claims, **characterised in** that the electric resistance of the lightning conductor (5) is max. 1 mΩ.

9. Microwave transmission unit according to one of the preceding claims, **characterised in** that the total electric resistance between the outer conductors of the coaxial connectors (3, 4) through the lightning conductor (5) is max. 0.1mΩ, most advantageously max. 0.01 mΩ.

10. Microwave transmission unit according to one of the preceding claims in form of a microwave filter (1) of the cavity resonator type including columnar resonators (25, 26, 27) formed integral with the cabinet (2).

11. Microwave filter (1) according to claim 10, **characterised in** that it includes a trimming plate (11) of solid metal with threaded holes for trimming screws (11), the free ends of which form capacitances together with the resonators (25, 26, 27), and where the trimming plate (9) forms the lightning conductor.